

REMARKS

Claims 1, 4, 7, 12, and 14 are now pending in the application. Claim 13 is now cancelled. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

Election/Restriction Requirement

Claim 13 stands withdrawn as allegedly not being directed to the elected invention. Applicants respectfully disagree and maintain that consideration of Claim 13 will not place an undue burden on the Examiner. However, Applicants now cancel Claim 13 in order to expedite prosecution of this application.

Rejection Under 35 U.S.C. § 103

Claims 1, 4, 7, 12, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Narutaki et al. (U.S. Pat. No. 6,215,538). This rejection is respectfully traversed.

Independent Claim 1 recites, in part, "the mask has a pattern having an asymmetrical, two-dimensional shape with no corner."

Independent Claim 4 recites, in part, "the mask has a pattern that has a polygonal two-dimensional shape that is asymmetrical and has all interior angles larger than 90 degrees."

Independent Claim 7 recites, in part, "the mask has a pattern with an asymmetrical two-dimensional shape such that points of intersection of respective normals to two arbitrary tangents on an outer periphery are dispersed."

Independent Claim 14 recites, in part, "the mask has a pattern with an asymmetrical, two-dimensional shape with no corner."

The Office Action acknowledges that “Narutaki et al., however, do not disclose the mask having an asymmetrical pattern,” as set forth in each of independent Claims 1, 4, 7, and 14. See 3-21-07 Office Action at 2. Further, the Office Action acknowledges that the Narutaki et al. reference fails to disclose a “polygonal two-dimensional” shape, as set forth in independent Claim 4. *Id.* at 3. However, the Office Action asserts that these features are obvious. Specifically, the “examiner takes Office [sic] Notice of the equivalence of a mask with a symmetrical pattern or a mask with an asymmetrical pattern for their use in the display art and the selection of any of these known equivalents for the purposes of forming a non-color filter region over a color filter would be within the level of ordinary skill in the art.” *Id.* at 2-3. Further, “the examiner takes Office [sic] Notice of the equivalence of such mask pattern without corner or polygonal shape pattern for their use in the display art and the selection of any of these known equivalents for the purposes of color adjusting would be within the level of ordinary skill in the art.” *Id.* at 3.

Thus, the Office Action bases its rejection on taking Official Notice that the above quoted features of Claims 1, 4, 7, and 14 are equivalent to that which is already known in the art. However, the Office Action provides no documentary evidence to support its conclusions and fails to provide a technical line of reasoning in support of its decision to take such Official Notice.

This Section 103 rejection is respectfully traversed.

Applicants submit that providing a mask pattern with “asymmetrical” and/or “polygonal” openings as claimed, such as openings without a corner, would not have been obvious at the time of the invention and that asymmetrical and/or polygonal openings are not equivalent to symmetrical openings.

Forming a colored layer using a mask having asymmetrical openings has numerous advantages over the use of a mask having symmetrical openings. Generally, use of a mask with asymmetrical openings produces colored layers having a more consistent shape as compared to colored layers produced with a mask having symmetrical openings. In particular, an asymmetrical opening prevents exposure light from focusing at any one point, thus more evenly removing the colored layer because the exposure light is more evenly dispersed. In contrast, when the opening is symmetrical, the light focuses at the center of the symmetrical shape, such as the center of a circular opening, so that other areas do not receive as much light. This results in peripheral portions of the color filter being unexposed. In addition, by providing the mask pattern with no corner, it is possible to avoid the occurrence of the diffraction of light, side etching, or the like, which often occurs in the corners. Such advantages are set forth throughout the application as filed, such as at paragraph 119.

There are numerous reasons why asymmetrical openings were not used prior to Applicants' invention. One of the reasons is due to the increased costs and difficulty associated with making such openings. Not realizing the benefits of using asymmetrical openings, others prior to Applicants had no reason to implement a mask that was more costly and more difficult to produce as compared to masks with symmetrical openings.

Applicants respectfully submit that the Office Action has improperly taken Official Notice.

The Office Action's use of Official Notice is improper because it failed to provide any documentary evidence to support its conclusion that the above quoted claim features are equivalent to the prior art. As set forth at M.P.E.P. § 2144.03(A):

It is never appropriate to rely solely on “common knowledge” in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *In re Zurko*, 258 F.3d at 1385, 59 U.S.P.Q.2d at 1697 (“[T]he Board cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings.”).

As the court held in *Zurko*, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support. *Id.* at 1385, 59 U.S.P.Q.2d at 1697. See also *In re Lee*, 277 F.3d 1338, 1344-45, 61 U.S.P.Q.2d 1430, 1434-35 (Fed. Cir. 2002)(In reversing the Board’s decision, the court stated “common knowledge and common sense” on which the Board relied in rejecting Lee’s application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency’s obligation.... The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.”).

Therefore, the Section 103 rejection is improper because the Office Action simply provided conclusory statements that the above quoted claim language of Claims 1, 4, 7, and 14 are equivalent to the prior art and failed to provide any documentary evidence to support its conclusion. Further, the “asymmetrical” openings of Claims 1, 4, 7, and 14 are not equivalent to prior art symmetrical openings for the reasons set forth above.

The Office Action’s use of Official Notice is also improper because the technical line of reasoning underlying a decision to take such notice is not clear and unmistakable, as required by M.P.E.P. § 2144.03(B). As set forth at § 2144.03(B):

If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *Soli*, 317 F.2d at 946, 37 U.S.P.Q. at 801; *Chevenard*, 139 F.2d at 713, 60 U.S.P.Q. at 241. The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to

challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

The Office Action provides no technical line of reasoning whatsoever to support its conclusory statement that the above quoted features of Claims 1, 4, 7, and 14 are common knowledge. Therefore, Applicants have no way to challenge the assertion of common knowledge. As a result, this Section 103 rejection is improper.

Applicants have successfully traversed this Section 103 rejection because, as set forth above, Applicants have pointed out the errors in the Action and stated why the noticed facts are not considered to be common knowledge or well-known in the art. M.P.E.P. § 2144.03(C). Thus, Applicants respectfully request that this Section 103 rejection be reconsidered and withdrawn.

For the Examiner to maintain this Section 103 rejection based on Official Notice in the next Office Action, “the examiner must provide documentary evidence in the next Office action.” M.P.E.P. § 2144.03(C). “If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding.” *Id.* (*citing* 37 C.F.R. 1.104(d)(2)).

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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